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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,004	12/09/2003	Petteri Yla-Outinen	047092.00148	2834

32294 7590 04/10/2008
SQUIRE, SANDERS & DEMPSEY L.L.P.
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EXAMINER	
SMITH, JOSHUA Y	

ART UNIT	PAPER NUMBER
2619	

MAIL DATE	DELIVERY MODE
04/10/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/730,004	YLA-OUTINEN ET AL.	
	Examiner	**Art Unit**	
	JOSHUA SMITH	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _06 December 2007_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-43_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-43_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

The amendment filed on 12/06/2007 has been entered.

- **Claims 1-43 are pending.**
- **Claims 1-43 stand rejected.**

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

   1. Determining the scope and contents of the prior art.
   2. Ascertaining the differences between the prior art and the claims at issue.
   3. Resolving the level of ordinary skill in the pertinent art.
   4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 1, 14, 15, 24, 26-32, 33, 40 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morrow (Document Number: EP 1 089 515 A2) in view of Sridhar (Pub. No.: US 2003/0112829 A1), hereafter referred to as Morrow and Sridhar, respectively.

As for Claim 1, Morrow teaches in paragraph [0010], lines 3-8, improving the efficiency of call control load sharing mechanism among call control servers of a connectionless packet network (substantively the same as “A method of controlling processing load in a packet data network” in the instant invention).

Morrow also teaches in paragraph [0023], lines 14-28, the Round Robin load sharing routine is implemented, and, in paragraph [0024], lines 37-45, the results of this load sharing routine include a new destination address that is entered into the packet, implicitly teaching that the load sharing routine implements load sharing through this destination address alteration, and the new destination address “contains” load sharing information for devices that will receive the packet with the new destination address (substantively the same as “setting a load control information in a predetermined field of a message” and in the instant invention).

Morrow also teaches in paragraph [0021], lines 27-30 and 31-34, and in Fig. 3A, page 10, of a session client server or CSCF process sending an INVITE message to NAT ROUTER/SWITCH (substantively the same as “routing said message in said packet data network” in the instant invention).

Morrow also teaches in paragraph [0022], lines 46-51, of an incoming packet being detected and with it a destination address C, which is used to find and calculate load sharing values and determine a load sharing routine to be used, and, in paragraph [0023], lines 25-31, to find the final destination address C1, C2, or C3, implicitly teaching that a destination address is treated as a value for implementing load sharing and is used to determine which of the CSCF with addresses C1, C2, or C3 will become

the destination to process the packet (substantively the same as “checking said load control information on the routing path of said message” and “selecting a processing resource of said packet data network in response to the result of said checking” in the instant invention). Morrow fails to explicitly teach setting load control information in a predetermined field of a message, checking said load control information on the routing path of said message, and selecting a processing resource of said packet data network in response to the result of said checking. Sridhar explicitly teaches these limitations.

In the same field of endeavor, Sridhar teaches in paragraphs [0017], [0034], and [0051]-[0055], and in FIG. 2, Sheet 1 of 5, and in FIG. 5, Sheet 4 of 5, load balancing fields (item 206, FIG. 2) in a packet where an LB field (FIG. 2) indicates that the packet must be inspected for load-balancing purposes, a TS field (FIG. 2) is a time-stamp field, and a LB field (FIG. 2) is for indicating failure on one or more links connected to a node, and where a packet has these fields set to determine the time it takes to route the packet though a link, and when the packet is received, these fields are inspected and a determination is made by a bandwidth broker to perform load balancing between two links and determine whether to continue to route traffic on a previous link or to re-route traffic on an alternate link (explicitly teaching “setting load control information in a predetermined field of a message”, “checking said load control information on the routing path of said message”, and “selecting a processing resource of said packet data network in response to the result of said checking”). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Sridhar with the invention of Morrow since Sridhar provides end-to-end load balancing between

two nodes on a ring, which can be implemented in the system of Morrow so that effective load balancing is implemented on links that are outside the load balancing of CSCF devices and augment the load balancing capabilities of Morrow, and Sridhar also provides effective load balancing on a ring, allowing the system of Sridhar to maintain load-balanced connection on a ring network and to implement the routing advantages that a ring network can maintain.

As for Claim 14, Morrow in view of Sridhar as applied to Claim 1 teaches load control information. Morrow further shows in lines 41-54, column 8, and in FIG. 7, page 14, that a message is checked by the NAT to determine if the message is the first message of a transaction yet to be established by the NAT or a message of an already established transaction, implicitly teaching that the message contains sufficient information to determine this.

As for Claim 15, Morrow in view of Sridhar as applied to Claim 1 teaches load control information and a session. Morrow further shows in lines 48-54, column 8, and in FIG. 7, page 14, the NAT can identify the CSCF and the transaction originator if the handshake process has already happened, implicitly teaching that the message contains sufficient information after a handshake process to determine the participants of an established connection.

As for Claim 24, Morrow in view of Sridhar as applied to Claims 1 and 15 teach those limitations. Morrow further teaches extracting information in response to detecting information. Morrow further teaches in paragraph [0022], lines 46-48, when an incoming packet is detected with a destination address of C, the NAT looks it up in the route table, implicitly teaching that the NAT can detect the address of C in the incoming packet and extract it for the purposes of comparing it to the route table.

As for Claim 26, Morrow teaches in paragraph [0022], lines 46-51, of an incoming packet being detected and with it a destination address C, which is used to find and calculate load sharing values and determine a load sharing routine to be used, and, in paragraph [0023], lines 25-31, to find the final destination address C1, C2, or C3, implicitly teaching that a destination address is treated as a value for implementing load sharing and is used to determine which of the CSCF with addresses C1, C2, or C3 will become the destination to process the packet (substantively the same as "a checker configured to check load control information on the routing path of said message" and "a selector configured to select a processing resource of said packet data network" in the instant invention). Morrow fails to explicitly teach checking load control information on the routing path of said message, and selecting a processing resource of said packet data network in response to the result of said checking. Sridhar explicitly teaches these limitations.

In the same field of endeavor, Sridhar teaches in paragraphs [0017], [0034], and [0051]-[0055], and in FIG. 2, Sheet 1 of 5, and in FIG. 5, Sheet 4 of 5, load balancing

fields (item 206, FIG. 2) in a packet where an LB field (FIG. 2) indicates that the packet must be inspected for load-balancing purposes, a TS field (FIG. 2) is a time-stamp field, and a LB field (FIG. 2) is for indicating failure on one or more links connected to a node, and where a packet has these fields set to determine the time it takes to route the packet though a link, and when the packet is received, these fields are inspected and a determination is made by a bandwidth broker to perform load balancing between two links and determine whether to continue to route traffic on a previous link or to re-route traffic on an alternate link (explicitly teaching “checking load control information on the routing path of said message”, and “selecting a processing resource of said packet data network in response to the result of said checking”). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Sridhar with the invention of Morrow since Sridhar provides end-to-end load balancing between two nodes on a ring, which can be implemented in the system of Morrow so that effective load balancing is implemented on links that are outside the load balancing of CSCF devices and augment the load balancing capabilities of Morrow, and Sridhar also provides effective load balancing on a ring, allowing the system of Sridhar to maintain load-balanced connection on a ring network and to implement the routing advantages that a ring network can maintain.

As for Claims 27, Morrow in view of Sridhar and Krause as applied to Claim 26 teach those limitations. Morrow further teaches in paragraph [0016], lines 47-52, of a processor containing multiple call session control functions (CSCF), and, in paragraph

[0018], lines 31-33, 37-38, and 43-51, of CSCFs operating in a connectionless network protocol involving a cellular system.

As for Claim 28, Morrow teaches in paragraph [0022], lines 46-51, of an incoming packet being detected and with it a destination address C, which is used to find and calculate load sharing values and determine a load sharing routine to be used, and, in paragraph [0023], lines 25-31, to find the final destination address C1, C2, or C3, implicitly teaching that a destination address is treated as a value for implementing load sharing and is used to determine which of the CSCF with addresses C1, C2, or C3 will become the destination to process the packet (substantively the same as “a selector is configured to select a predetermined processor node to which said message is distributed” in the instant invention).

As for Claims 29 and 30, Morrow in view of Sridhar as applied to Claim 26 teaches load control information. Morrow further shows in lines 41-54, column 8, and in FIG. 7, page 14, that a message is checked by the NAT to determine if the message is the first message of a transaction yet to be established by the NAT or a message of an already established transaction, implicitly teaching that the message contains sufficient information to determine this.

As for Claim 31, Morrow in view of Sridhar as applied to Claim 30 teaches load control information and a session. Morrow further shows in lines 48-54, column 8, and

in FIG. 7, page 14, the NAT can identify the CSCF and the transaction originator if the handshake process has already happened, implicitly teaching that the message contains sufficient information after a handshake process to determine the participants of an established connection.

As for Claim 32, Morrow teaches in paragraph [0023], lines 14-28, the Round Robin load sharing routine is implemented, and, in paragraph [0024], lines 37-45, the results of this load sharing routine include a new destination address that is entered into the packet, implicitly teaching that the load sharing routine implements load sharing through this destination address alteration, and the new destination address “contains” load sharing information for devices that will receive the packet with the new destination address, and, in paragraph [0022], lines 46-51, of an incoming packet being detected and with it a destination address C, which is used to find and calculate load sharing values and determine a load sharing routine to be used, and, in paragraph [0023], lines 25-31, to find the final destination address C1, C2, or C3, implicitly teaching that a destination address is treated as a value for implementing load sharing and is used to determine which of the CSCF with addresses C1, C2, or C3 will become the destination to process the packet (substantively the same as “a transmitter configured to transmit a message to a packet data network, wherein said apparatus is configured to set into a predetermined field of said message a load control information to select processing resources of dais packet data network” and in the instant invention). Morrow fails to

explicitly teach setting load control information in a predetermined field of a message. Sridhar explicitly teaches these limitations.

In the same field of endeavor, Sridhar teaches in paragraphs [0017], [0034], and [0051]-[0055], and in FIG. 2, Sheet 1 of 5, and in FIG. 5, Sheet 4 of 5, load balancing fields (item 206, FIG. 2) in a packet where an LB field (FIG. 2) indicates that the packet must be inspected for load-balancing purposes, a TS field (FIG. 2) is a time-stamp field, and a LB field (FIG. 2) is for indicating failure on one or more links connected to a node, and where a packet has these fields set to determine the time it takes to route the packet though a link, and when the packet is received, these fields are inspected and a determination is made by a bandwidth broker to perform load balancing between two links and determine whether to continue to route traffic on a previous link or to re-route traffic on an alternate link (explicitly teaching "setting load control information in a predetermined field of a message" in the instant invention). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Sridhar with the invention of Morrow since Sridhar provides end-to-end load balancing between two nodes on a ring, which can be implemented in the system of Morrow so that effective load balancing is implemented on links that are outside the load balancing of CSCF devices and augment the load balancing capabilities of Morrow, and Sridhar also provides effective load balancing on a ring, allowing the system of Sridhar to maintain load-balanced connection on a ring network and to implement the routing advantages that a ring network can maintain.

As for Claim 33, Morrow in view of Sridhar and Krause as applied to Claim 32 teach those limitations. Morrow further teaches in paragraph [0016], lines 47-52, of a processor containing multiple call session control functions (CSCF), and, in paragraph [0018], lines 31-33, 37-38, and 43-51, of CSCFs operating in a connectionless network protocol involving a cellular system.

As for Claim 40, Morrow teaches in paragraph [0023], lines 14-28, the Round Robin load sharing routine is implemented, and, in paragraph [0024], lines 37-45, the results of this load sharing routine include a new destination address that is entered into the packet, implicitly teaching that the load sharing routine implements load sharing through this destination address alteration, and the new destination address “contains” load sharing information for devices that will receive the packet with the new destination address (substantively the same as “set a load control information in a predetermined field of a message” and in the instant invention).

Morrow also teaches in paragraph [0022], lines 46-51, of an incoming packet being detected and with it a destination address C, which is used to find and calculate load sharing values and determine a load sharing routine to be used, and, in paragraph [0023], lines 25-31, to find the final destination address C1, C2, or C3, implicitly teaching that a destination address is treated as a value for implementing load sharing and is used to determine which of the CSCF with addresses C1, C2, or C3 will become the destination to process the packet (substantively the same as “check load control information on the routing path of said message” and “select a processing resource of

said packet data network in response to the result of said checking” in the instant invention). Morrow fails to explicitly teach a first network element configured to set load control information in a predetermined field of a message, and a second network element configured to check said load control information on the routing path of said message and configured to select a processing resource of said packet data network in response to the result of said checking of the load control information. Sridhar teaches these limitations.

In the same field of endeavor, Sridhar teaches in paragraphs [0017], [0034], and [0051]-[0055], and in FIG. 2, Sheet 1 of 5, and in FIG. 5, Sheet 4 of 5, load balancing fields (item 206, FIG. 2) in a packet where an LB field (FIG. 2) indicates that the packet must be inspected for load-balancing purposes, a TS field (FIG. 2) is a time-stamp field, and a LB field (FIG. 2) is for indicating failure on one or more links connected to a node, and where a packet has these fields set to determine the time it takes to route the packet though a link, and when the packet is received, these fields are inspected and a determination is made by a bandwidth broker to perform load balancing between two links and determine whether to continue to route traffic on a previous link or to re-route traffic on an alternate link, and where node B sends a packet to node A with TS=1, LB=1, and R=1 in a packet (FIG. 2) in step 527 (FIG. 5), and node A receives this packet and makes the determination to re-route existing traffic on a new link (explicitly teaching “a first network element configured to set load control information in a predetermined field of a message, and a second network element configured to check said load control information on the routing path of said message and configured to

select a processing resource of said packet data network in response to the result of said checking of the load control information"). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Sridhar with the invention of Morrow since Sridhar provides end-to-end load balancing between two nodes on a ring, which can be implemented in the system of Morrow so that effective load balancing is implemented on links that are outside the load balancing of CSCF devices and augment the load balancing capabilities of Morrow, and Sridhar also provides effective load balancing on a ring, allowing the system of Sridhar to maintain load-balanced connection on a ring network and to implement the routing advantages that a ring network can maintain.

As for Claim 42, Morrow in view of Sridhar and Krause as applied to Claim 40 teach those limitations. Morrow further teaches in paragraph [0016], lines 47-52, of a processor containing multiple call session control functions (CSCF), and, in paragraph [0018], lines 31-33, 37-38, and 43-51, of CSCFs operating in a connectionless network protocol involving a cellular system.

Claims 2, 6-8, 10-13, 18-22 and 35, are rejected under 35 U.S.C. 103(a) as being unpatentable over Morrow in view of Sridhar, and further in view of Krause et al. (Patent Number: 5,914,953), hereafter referred to Krause.

As for Claims 2 and 35, Morrow in view of Sridhar as applied to Claims 1 and 32 teach those limitations. Morrow fails to teach a subfield of a user part of an address

header. However, in the same field of endeavor, Krause shows in lines 15-25 and 36-40, column 17, and lines 52-63, column 58, and in FIG. 21A, Sheet 18 of 30, of a message packet header field containing a destination ID that contains four sub-fields, and where each sub-field is a predetermined bit length. It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Krause with the invention of Morrow since Krause provides a router processing system that prevents deadlocks and provides fault tolerance, hardware redundancy, and software recovery techniques, enhancing the robustness of the system of Morrow.

As for Claim 6, Morrow teaches in paragraph [0023], lines 16-22, of multiple load sharing values that are utilized in determining the final destination address: values “C”, “j”, “m”, and “n”. Morrow does not teach of a plurality of subfields in user part for conveying different types of information.

However, in the same field of endeavor, Krause shows in lines 15-25 and 36-40, column 17, and lines 52-63, column 58, and in FIG. 21A, Sheet 18 of 30, of a message packet header field containing a destination ID that contains four sub-fields, and where each sub-field is designed to carry a different type of information. It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Krause with the invention of Morrow since Krause provides a router processing system that prevents deadlocks and provides fault tolerance, hardware redundancy, and software recovery techniques, enhancing the robustness of the system of Morrow.

As for Claim 7, Morrow in view of Sridhar and Krause as applied to Claim 6 teach those limitations. Morrow fails to teach the user part is parsed and divided into said subfields. Krause teaches these limitations.

In the same field of endeavor, Krause shows in lines 15-25 and 36-40, column 17, and lines 52-63, column 58, and in FIG. 21A, Sheet 18 of 30, of a message packet header field containing a destination ID that is divided into four sub-fields. It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Krause with the invention of Morrow since Krause provides a router processing system that prevents deadlocks and provides fault tolerance, hardware redundancy, and software recovery techniques, enhancing the robustness of the system of Morrow.

As for Claim 8, Morrow in view of Sridhar and Krause as applied to Claim 6, teach those limitations. Morrow fails to teach the user part is parsed and divided into said subfields. Krause teaches these limitations.

In the same field of endeavor, Krause shows in lines 15-25 and 36-40, column 17, and lines 52-63, column 58, and in FIG. 21A, Sheet 18 of 30, of a message packet header field containing a destination ID with four sub-fields, where the first sub-field is a 14-bit Region ID, the second sub-field is a 6-bit Device ID, the third sub-field is three bits reserved for future expansion, and the fourth sub-field is a Path Select (P) bit. It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Krause with the invention of Morrow since Krause provides a router

processing system that prevents deadlocks and provides fault tolerance, hardware redundancy, and software recovery techniques, enhancing the robustness of the system of Morrow.

As for Claim 10, Morrow in view of Sridhar and Krause as applied to Claim 1 teach those limitations. Morrow fails to teach a virtual address is shared by a plurality of processor nodes. However, in the same field of endeavor, Krause shows in lines 56-61, column 58, of a Destination ID containing a Device ID, which is indicative of the particular device within a particular region. It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Krause with the invention of Morrow since Krause provides a router processing system that prevents deadlocks and provides fault tolerance, hardware redundancy, and software recovery techniques, enhancing the robustness of the system of Morrow.

As for Claims 11, Morrow in view of Sridhar and Krause as applied to Claim 10 teach those limitations. Morrow further teaches in paragraph [0016], lines 47-52, of a processor containing multiple call session control functions (CSCF), and, in paragraph [0018], lines 31-33, 37-38, and 43-51, of CSCFs operating in a connectionless network protocol involving a cellular system.

As for Claim 12, Morrow in view of Sridhar and Krause as applied to Claim 2 teach those limitations. Morrow fails to teach a port number indicating a port for

receiving. Krause further teaches in line 47, column 63, of a 3-bit target port number, and, in lines 8-9, column 64, of input ports. It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Krause with the invention of Morrow since Krause provides a router processing system that prevents deadlocks and provides fault tolerance, hardware redundancy, and software recovery techniques, enhancing the robustness of the system of Morrow.

As for Claim 13, Morrow in view of Sridhar and Krause as applied to Claims 2 and 12 teach those limitations. Morrow fails to teach a second port. Krause further teaches in lines 8-9, column 64, of two or more input ports. It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Krause with the invention of Morrow since Krause provides a router processing system that prevents deadlocks and provides fault tolerance, hardware redundancy, and software recovery techniques, enhancing the robustness of the system of Morrow.

As for Claim 18, Morrow in view of Sridhar and Krause as applied to Claim 1 teach those limitations. Morrow fails to teach a part of a host name of a header field. However, in the same field of endeavor, Krause shows in lines 55-61, column 58, of a Destination ID of a packet containing a Device ID, which is indicative of the particular device within a particular region. It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Krause with the invention of Morrow since Krause provides a router processing system that prevents deadlocks and

provides fault tolerance, hardware redundancy, and software recovery techniques, enhancing the robustness of the system of Morrow.

As for Claim 19, Morrow teaches in paragraph [0023], lines 16-22, of multiple load sharing values that are utilized in determining the final destination address: values "C", "j", "m", and "n". Morrow does not teach load control information is set as parameter of a header field. Krause teaches these limitations.

However, in the same field of endeavor, Krause shows in lines 15-25 and 36-40, column 17, and lines 52-63, column 58, and in FIG. 21A, Sheet 18 of 30, of a message packet header field containing a destination ID that contains four sub-fields, and where each sub-field is designed to carry a different type of information. It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Krause with the invention of Morrow since Krause provides a router processing system that prevents deadlocks and provides fault tolerance, hardware redundancy, and software recovery techniques, enhancing the robustness of the system of Morrow.

As for Claim 20, Morrow in view of Sridhar and Krause as applied to Claim 1 teach those limitations. Morrow fails to teach a port number indicating a port for receiving. Krause further teaches in line 47, column 63, of a 3-bit target port number, and, in lines 8-9, column 64, of input ports. It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Krause with the invention of Morrow since Krause provides a router processing system that prevents deadlocks

and provides fault tolerance, hardware redundancy, and software recovery techniques, enhancing the robustness of the system of Morrow.

As for Claim 21, Morrow in view of Sridhar and Krause as applied to Claims 1, 12, and 13 teach those limitations. Morrow further shows differentiating between a first message form subsequent messages. Morrow further shows in lines 41-54, column 8, and in FIG. 7, page 14, that a message is checked by the NAT to determine if the message is the first message of a transaction yet to be established or a message of an already established transaction, implicitly teaching that the message contains sufficient information to determine this.

As for Claim 22, Morrow in view of Sridhar and Krause as applied to Claim 1 teach those limitations. Morrow fails to teach an extension header field. However, in the same field of endeavor, Krause shows in lines 15-25 and 36-40, column 17, and lines 52-63, column 58, and in FIG. 21A, Sheet 18 of 30, of a message packet header field containing a destination ID with four sub-fields, where the third sub-field is three bits reserved for future expansion (see item RSVD, in FIG. 21A, Sheet 18 of 30). It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Krause with the invention of Morrow since Krause provides a router processing system that prevents deadlocks and provides fault tolerance, hardware redundancy, and software recovery techniques, enhancing the robustness of the system of Morrow.

Claims 3-5 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morrow in view of Sridhar, Krause, and further in view of Orton et al. (US 6,678,735 B1), hereafter referred to as Orton.

As for Claim 3, Morrow in view of Sridhar as applied to Claims 1 and 2 teach those limitations. Morrow fails to teach except a via branch of a SIP message. However, in the same field of endeavor, Orton teaches in lines 30-34, column 1, a Via header of a SIP message. It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Orton with the invention of Morrow since Orton provides a method and apparatus that allows efficient operation of SIP by processing application non-essential information, such as routing information, in such a way that an application program is not detracted from its essential task, allowing the system elements of Morrow to connect to SIP without their application programs being overburdened.

As for Claim 4, Morrow in view of Sridhar as applied to Claim 1 teach those limitations. Morrow fails to teach copying from one predetermined filed to another. Marrow further shows in paragraph [0021], lines 27-37, and in FIG. 3A, page 10, item CSCF 2 receives an INVITE message with C2 as the destination address, and then puts the C2 address in the source address of the TRYING message. It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Orton with the invention of Morrow since Orton provides a method and apparatus that

allows efficient operation of SIP by processing application non-essential information, such as routing information, in such a way that an application program is not detracted from its essential task, allowing the system elements of Morrow to connect to SIP without their application programs being overburdened.

As for Claims 5 and 36, Morrow in view of Sridhar as applied to Claims 1 and 35 teach those limitations. Morrow fails to teach URI of a SIP Route header. However, in the same field of endeavor, Orton teaches in lines 14-15, column 10, Route headers, and, lines 24-25 and 42-44, column 11, and in FIG. 14, Sheet 8 of 8, of SIP message containing Uniform Resource Identifier (URI). It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Orton with the invention of Morrow since Orton provides a method and apparatus that allows efficient operation of SIP by processing application non-essential information, such as routing information, in such a way that an application program is not detracted from its essential task, allowing the system elements of Morrow to connect to SIP without their application programs being overburdened.

Claims 9 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morrow in view of Sridhar, Krause, and further in view of Sanchez Herrero et al. (Patent No.: US 7,177,642 B2), hereafter referred to as Sanchez Herrero.

As for Claim 9, Morrow in view of Sridhar as applied to Claim 6 teach those limitations. Morrow fails to teach except separation by bit string, character, or character

string. However, in the same field of endeavor, Krause shows in lines 15-25 and 36-40, column 17, and lines 52-63, column 58, and in FIG. 21A, Sheet 18 of 30, of a Device ID separated from a path select bit (P) by 3 bits of the 3-bit RSVD field. It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Krause with the invention of Morrow since Krause provides a router processing system that prevents deadlocks and provides fault tolerance, hardware redundancy, and software recovery techniques, enhancing the robustness of the system of Morrow.

In the same field of endeavor, Sanchez Herrero shows in line 51, column 4, a server name with two periods "." separated by a string of characters "wcom", and where "server2" is separated from "wcom" by a single period ".". It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Sanchez Herrero with the invention of Morrow since Sanchez Herrero provides a method and system where a user is allowed to register into a system from different terminals simultaneously and can receive calls for any of these terminals through one public-ID associated to a single subscription, allowing the system of Morrow to provide such a service to users.

As for Claim 34, Morrow teaches in paragraph [0016], lines 47-54, call session control functions (CSCFs). Morrow does not teach of P-SCSF, I-CSCF, and S-CSCF. However, in the same field of endeavor, Sanchez Herrero teaches in lines 13-14, 17-18, and 22, column 7, and in FIG. 5, Sheet 5 of 8, Proxy Call State Control Function (P-

CSCF), Interrogating Call State Control Function (I-CSCF), and Serving Call State Control Function (S-CSCF). It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Sanchez Herrero with the invention of Morrow since Sanchez Herrero provides a method and system where a user is allowed to register into a system from different terminals simultaneously and can receive calls for any of these terminals through one public-ID associated to a single subscription, allowing the system of Morrow to provide such a service to users.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morrow in view of Sridhar, Krause, Oroton, and Sanchez Herrero.

As for Claim 16, Morrow in view of Sridhar as applied to Claim 1 teach those limitations. Morrow fails to teach a via header field or a contact header field of a SIP session initiation protocol message. Orton teaches a via header field of a SIP session initiation protocol message, and Sanchez Herrero teaches contact headers.

In the same field of endeavor, Orton teaches in lines 30-34, column 1, a Via header of a SIP message. It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Orton with the invention of Morrow since Orton provides a method and apparatus that allows efficient operation of SIP by processing application non-essential information, such as routing information, in such a way that an application program is not detracted from its essential task, allowing the system elements of Morrow to connect to SIP without their application programs being overburdened.

In the same field of endeavor, Sanchez Herrero teaches in lines 45-46, column 4, of “Contact” headers. It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Sanchez Herrero with the invention of Morrow since Sanchez Herrero provides a method and system where a user is allowed to register into a system from different terminals simultaneously and can receive calls for any of these terminals through one public-ID associated to a single subscription, allowing the system of Morrow to provide such a service to users.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morrow in view of Sirdhar, and further in view of Inoue et al. (Patent No.: US 6,501,767 B1), hereafter referred to as Inoue.

As for Claim 17, Morrow in view of Sridhar as applied to Claim 14 teach those limitations. Morrow fails to teach hidden information not meaningful to other networks. Inoue teaches these limitations.

In the same field of endeavor, Inoue teaches in column 11, lines 12-22, encryption of packets to be transmitted from a input/output unit to an external network, and packets received from an external network are decrypted (hidden information not meaningful to other networks). It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Inoue with the invention of Morrow since Inoue provides a method of encrypting data when communicating over an external network and protecting the data.

Claims 23 and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morrow in view of Sridhar, Krause, and further in view of Fredericks et al. (Patent Number: 6,115,361), hereafter referred to as Fredericks.

As for Claim 23 and 37, Morrow in view of Sridhar and Krause as applied to Claims 14, 18, 19 and 20 teaches those limitations. Morrow fails to teach information is set in the payload of the message. However, in the same field of endeavor, Fredericks teaches in lines 7-10, column 2, upon receipt of a packet having a recognized service code in the header, a receiving device knows that the payload data is not regular information traffic, and, in lines 2-3, column 6, The first word in the payload specifies the Command Code. It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Fredericks with the invention of Morrow since Fredericks provides a method where network elements can cooperate and communicate for quickly reporting link failures and to facilitate link failure diagnosis and remedial action, allowing the system of Morrow to be more robust in dealing with link failures.

As for Claim 38, Morrow in view of Sridhar as applied to Claim 37 teaches load control information. Morrow further shows in lines 41-54, column 8, and in FIG. 7, page 14, that a message is checked by the NAT to determine if the message is the first message of a transaction yet to be established by the NAT or a message of an already established transaction, implicitly teaching that the message contains sufficient information to determine this.

As for Claim 39, Morrow in view of Sridhar as applied to Claim 38 teaches load control information and a session. Morrow further shows in lines 48-54, column 8, and in FIG. 7, page 14, the NAT can identify the CSCF and the transaction originator if the handshake process has already happened, implicitly teaching that the message contains sufficient information after a handshake process to determine the participants of an established connection.

Claims 25 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morrow in view of Sridhar and Fredericks.

As for Claim 25 and 41, Morrow teaches in paragraph [0010], lines 3-8, improving the efficiency of call control load sharing mechanism among call control servers of a connectionless packet network (substantively the same as “A method of controlling processing load in a packet data network” in the instant invention).

Morrow also teaches in paragraph [0023], lines 14-28, the Round Robin load sharing routine is implemented, and, in paragraph [0024], lines 37-45, the results of this load sharing routine include a new destination address that is entered into the packet, implicitly teaching that the load sharing routine implements load sharing through this destination address alteration, and the new destination address “contains” load sharing information for devices that will receive the packet with the new destination address (substantively the same as “setting a load control information in a predetermined field of a message” and in the instant invention).

Morrow also teaches in paragraph [0021], lines 27-30 and 31-34, and in Fig. 3A, page 10, of a session client server or CSCF process sending an INVITE message to NAT ROUTER/SWITCH (substantively the same as “routing said message in said packet data network” in the instant invention).

Morrow also teaches in paragraph [0022], lines 46-51, of an incoming packet being detected and with it a destination address C, which is used to find and calculate load sharing values and determine a load sharing routine to be used, and, in paragraph [0023], lines 25-31, to find the final destination address C1, C2, or C3, implicitly teaching that a destination address is treated as a value for implementing load sharing and is used to determine which of the CSCF with addresses C1, C2, or C3 will become the destination to process the packet (substantively the same as “checking said load control information on the routing path of said message” and “selecting a processing resource of said packet data network in response to the result of said checking” in the instant invention). Morrow fails to explicitly teach setting load control information in a predetermined field of a message, checking said load control information on the routing path of said message, and selecting a processing resource of said packet data network in response to the result of said checking, and storing received information. Sridhar explicitly teaches these limitations.

In the same field of endeavor, Sridhar teaches in paragraphs [0017], [0034], and [0051]-[0055], and in FIG. 2, Sheet 1 of 5, and in FIG. 5, Sheet 4 of 5, load balancing fields (item 206, FIG. 2) in a packet where an LB field (FIG. 2) indicates that the packet must be inspected for load-balancing purposes, a TS field (FIG. 2) is a time-stamp field,

and a LB field (FIG. 2) is for indicating failure on one or more links connected to a node, and where a packet has these fields set to determine the time it takes to route the packet though a link, and when the packet is received, these fields are inspected and a determination is made by a bandwidth broker to perform load balancing between two links and determine whether to continue to route traffic on a previous link or to re-route traffic on an alternate link, and where node B sends a packet to node A with TS=1, LB=1, and R=1 in a packet (FIG. 2) in step 527 (FIG. 5), and node A receives this packet and makes the determination to re-route existing traffic on a new link (explicitly teaching “a first network element configured to set load control information in a predetermined field of a message, and a second network element configured to check said load control information on the routing path of said message and configured to select a processing resource of said packet data network in response to the result of said checking of the load control information”). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Sridhar with the invention of Morrow since Sridhar provides end-to-end load balancing between two nodes on a ring, which can be implemented in the system of Morrow so that effective load balancing is implemented on links that are outside the load balancing of CSCF devices and augment the load balancing capabilities of Morrow, and Sridhar also provides effective load balancing on a ring, allowing the system of Sridhar to maintain load-balanced connection on a ring network and to implement the routing advantages that a ring network can maintain.

In the same field of endeavor, Fredericks teaches in lines 66, column 4, to line 3, column 5, of devices that support a certain service maintain a registration list (e.g., a database, stack, or equivalent data structure) containing addresses of other devices from which it received requests, and, in lines 19-27, column 5, each device can exchange requests and maintain lists and, in lines. It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Fredericks with the invention of Morrow since Fredericks provides a method for efficiently reporting network link failures among network elements, allowing the network of Morrow to identify network problems and to compensate for and bypass such failures.

Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morrow in view of Sridhar and Sanchez Herrero.

As for Claim 43, Morrow teaches in paragraph [0022], lines 46-51, of an incoming packet being detected and with it a destination address C, which is used to find and calculate load sharing values and determine a load sharing routine to be used, and, in paragraph [0023], lines 25-31, to find the final destination address C1, C2, or C3, implicitly teaching that a destination address is treated as a value for implementing load sharing and is used to determine which of the CSCF with addresses C1, C2, or C3 will become the destination to process the packet (substantively the same as “a checker configured to check load control information on the routing path of said message” and “a selector configured to select a processing resource of said packet data network” in the instant invention). Morrow does not teach of P-SCSF, I-CSCF, and S-CSCF, and

Morrow fails to explicitly teach checking load control information on the routing path of said message, and selecting a processing resource of said packet data network in response to the result of said checking. Sridhar explicitly teaches checking load control information on the routing path of said message, and selecting a processing resource of said packet data network in response to the result of said checking, and Sanchez Herrero teaches P-SCSF, I-CSCF, and S-CSCF.

In the same field of endeavor, Sridhar teaches in paragraphs [0017], [0034], and [0051]-[0055], and in FIG. 2, Sheet 1 of 5, and in FIG. 5, Sheet 4 of 5, load balancing fields (item 206, FIG. 2) in a packet where an LB field (FIG. 2) indicates that the packet must be inspected for load-balancing purposes, a TS field (FIG. 2) is a time-stamp field, and a LB field (FIG. 2) is for indicating failure on one or more links connected to a node, and where a packet has these fields set to determine the time it takes to route the packet though a link, and when the packet is received, these fields are inspected and a determination is made by a bandwidth broker to perform load balancing between two links and determine whether to continue to route traffic on a previous link or to re-route traffic on an alternate link (explicitly teaching "checking load control information on the routing path of said message", and "selecting a processing resource of said packet data network in response to the result of said checking"). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Sridhar with the invention of Morrow since Sridhar provides end-to-end load balancing between two nodes on a ring, which can be implemented in the system of Morrow so that effective load balancing is implemented on links that are outside the load balancing of

CSCF devices and augment the load balancing capabilities of Morrow, and Sridhar also provides effective load balancing on a ring, allowing the system of Sridhar to maintain load-balanced connection on a ring network and to implement the routing advantages that a ring network can maintain.

In the same field of endeavor, Sanchez Herrero teaches in lines 13-14, 17-18, and 22, column 7, and in FIG. 5, Sheet 5 of 8, Proxy Call State Control Function (P-CSCF), Interrogating Call State Control Function (I-CSCF), and Serving Call State Control Function (S-CSCF). It would have been obvious to one skilled in the art at the time of the invention to combine the invention of Sanchez Herrero with the invention of Morrow since Sanchez Herrero provides a method and system where a user is allowed to register into a system from different terminals simultaneously and can receive calls for any of these terminals through one public-ID associated to a single subscription, allowing the system of Morrow to provide such a service to users.

Response to Arguments

I. Arguments for rejections made under ***35 USC § 102.***

Applicant's arguments filed 12/06/2007 have been fully considered but they are not persuasive.

Applicant submits that the Morrow reference does not disclose or suggest that a load control information is set in a predetermined field of a message, and that the load control information of a message is checked on its routing path. Examiner respectfully

disagrees. Although Morrow teaches setting a load control information in a route table of a network address translation device, Morrow teaches in paragraph [0023] that a packet engine takes a destination network address C of a packet and uses it as a key to search a route table to find an f value, and then find a j value, and then find a new j value, then to find C1, and then to find a final destination IP address “d” (e.g., d=C1), and where the packet engine then changes the address field of the received IP packet, which originally contained the value C, to the newly designated destination IP address d of a CSCF, where, in paragraphs [0010]-[0011], this is to improve the efficiency of a call control load sharing mechanism among a group of call session control functions (CSCFs). This implicitly teaches that a route control table contains information for improving call control load sharing, and since the newly designated destination IP address d is used to change the address field of the received IP packet, the packet engine is inserting load control information that improves call control load sharing into the network IP address field, and is substantively the same as setting a load control information in a predetermined field of a message.

Applicant also submits that paragraph [0022] of Morrow merely describes using route table entries “I” and “f” for indicating IP addresses and address translation, and paragraph [0023] to [0025] of Morrow merely describes checking of the entries of a route table, and no selection processing resources is performed in response to the result of checking step in which control information of the route update message is checked. Examiner respectfully disagrees. As discussed above, since the a table is searched using an address as a key, and the result is designating the destination

network address of a CSFC, which is a call session control function of a group of CSCFs, and in which a CSCF is a network resource, and since an address of a CSCF is designated after searching a routing table of values, this is substantively the same as selecting a processing resource in response to a result of a checking step.

Applicant also submits that the “d” and “n” parameters of Morrow cannot be interpreted as load control information. Examiner respectfully disagrees. All the values of the table in the process of Morrow are information involved in the purpose of load control of the SCFCs and are used to select a SCFC, and, therefore, each parameter can be interpreted as containing load control information used to implement load sharing.

Applicant’s other arguments with respect to Claims 14, 15, 24, and 40 have been consider but are not persuasive since, as discussed above, Morrow teaches the limitations of Claim 1.

II. Arguments for rejections made under ***35 USC § 103.***

Applicant’s arguments, see pages 19-20, filed 12/06/2007, with respect to the rejection(s) of claim(s) 17 under 35 USC § 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art reference Inoue et al. (Patent No.: US 6,501,767 B1). Please see the above rejection of Claim 17.

Applicant's other arguments with respect to Claims 2-13, 16, 18-23, 25-39 and 42 have been consider but are not persuasive since, as discussed above, Morrow teaches the limitations of Claim 1.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSHUA SMITH whose telephone number is (571)270-1826. The examiner can normally be reached on Monday-Thursday 9:30am-7pm, Alternating Fridays 9:30am-6pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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